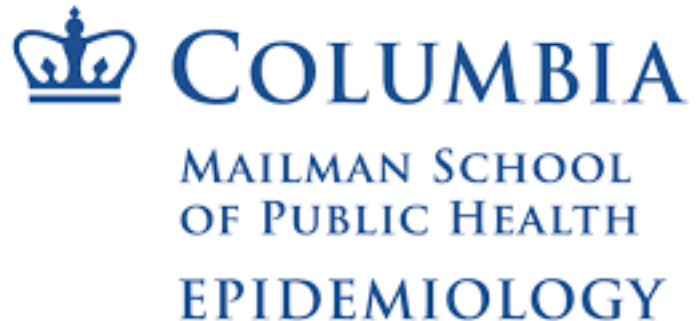


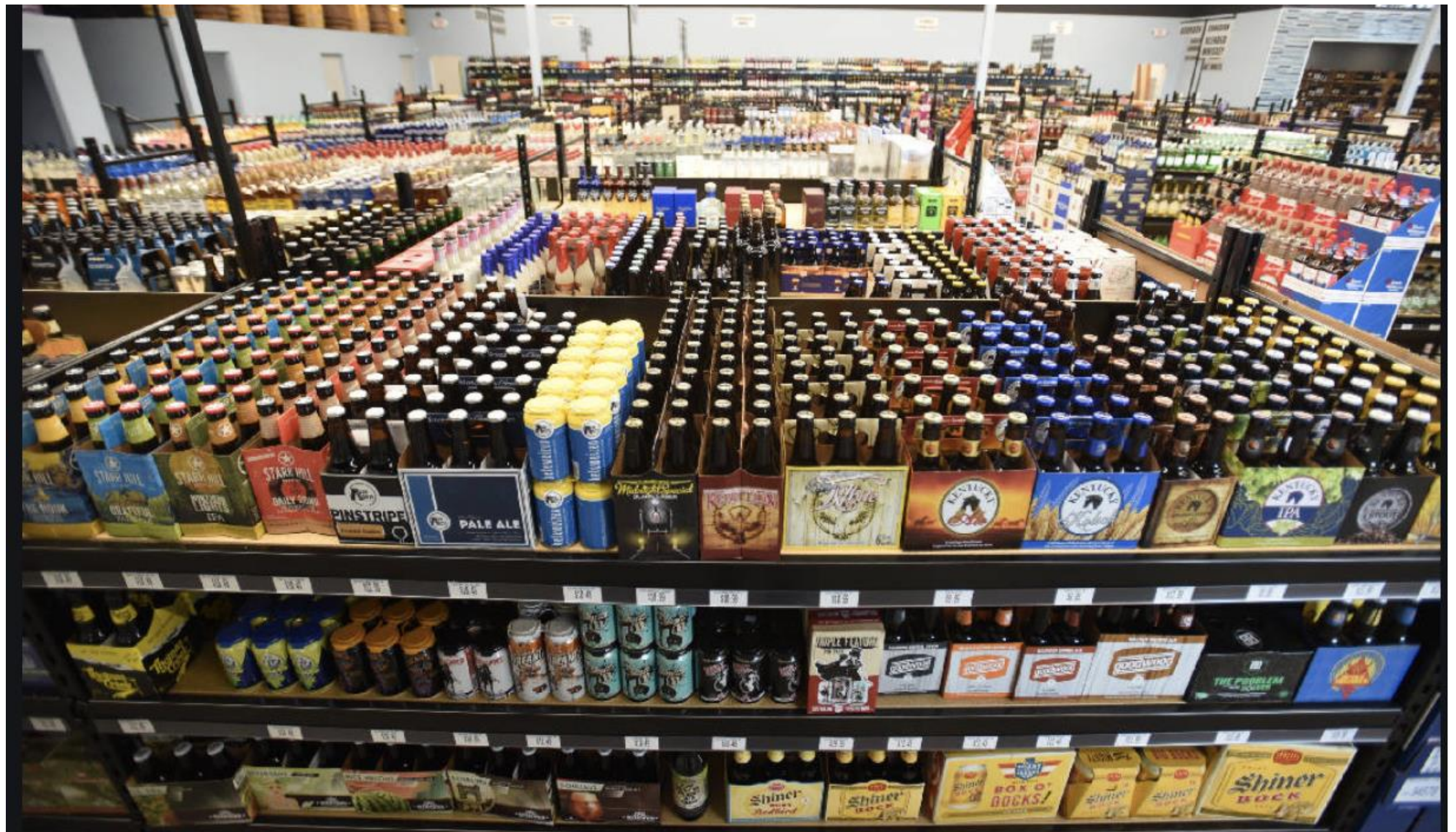
Covid-19 and alcohol, tobacco, and nicotine vaping



Katherine Keyes
Associate Professor of Epidemiology
Columbia University

Topics for discussion today

- Part 1: Adolescent substance use and the pandemic: interrogating potential hypotheses
- Part 2: State-to-state heterogeneity and beginning to tackle Covid-19 policy analyses
- Part 3: Setting a research agenda moving forward: localized and long-term period effects



		<u>Prevalence of Substance</u>	
		Decrease	Steady/Increase
Availability of <u>Substance</u>	Decrease	(1) Constriction of Supply	(3) Persevering
	Steady/ Increase	(2) Constriction of Use Opportunities	(4) No changes during social distancing

Adolescent Drug Use Before and During U.S. National COVID-19 Social Distancing Policies

- Wave 1 data collected February to March 2020 (N=3,770)
- Wave 2 data collected July to August 2020 (N=582)

Social distancing practices at follow up

Extreme

Question: "Have you met friends in person since the pandemic started"? Coded 1 for response of "No."

.20 (.16 - .25)

High

Questions: "When you are with your friends who do not live with you, how often do you stay six feet apart from them?" and "When you are with your friends who do not live with you, how often do you wear a facemask?" (Questions asked only of those who had met with friends in person since the pandemic started). Coded 1 for respondents whose answers were "Always or almost always" or "Often" for both questions.

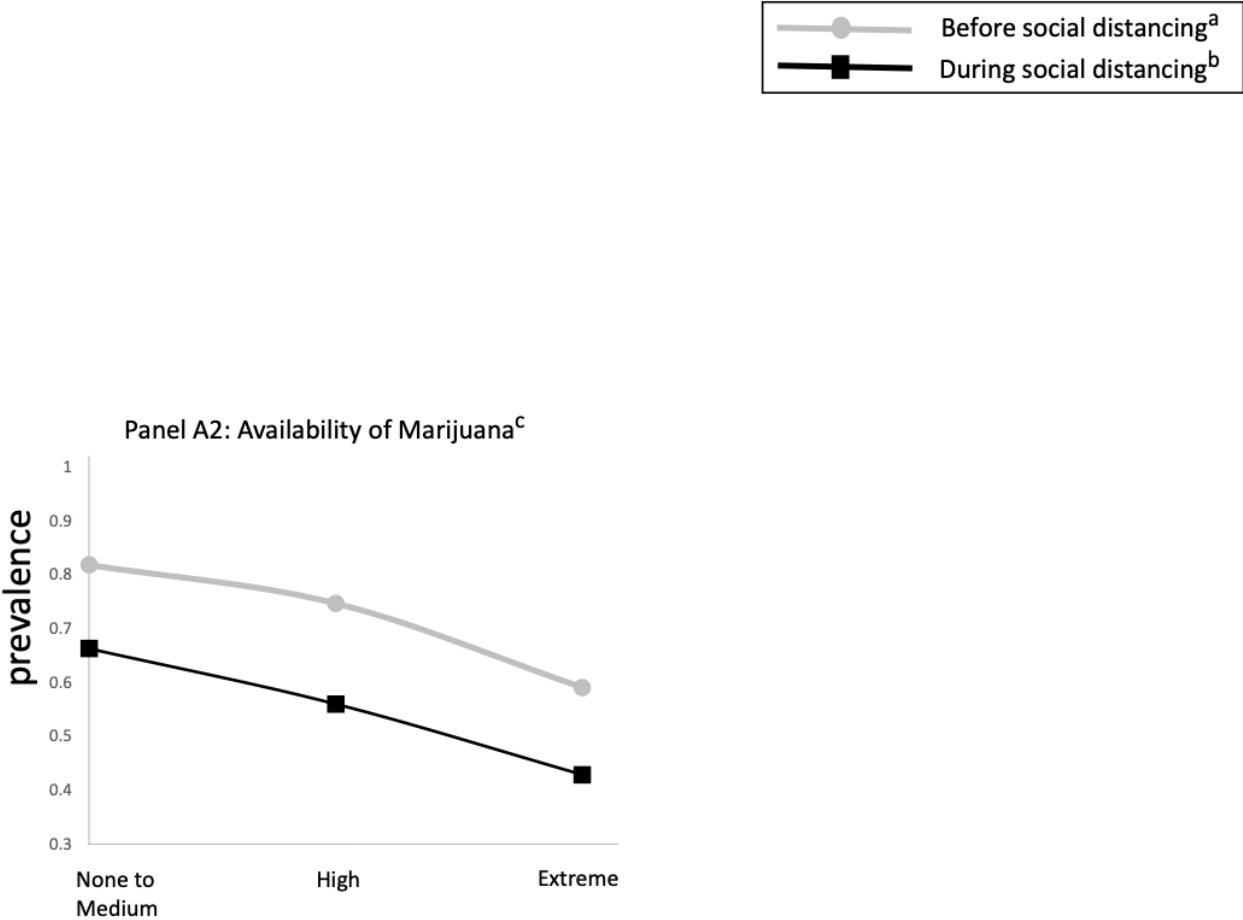
.18 (.14 - .23)

None to medium

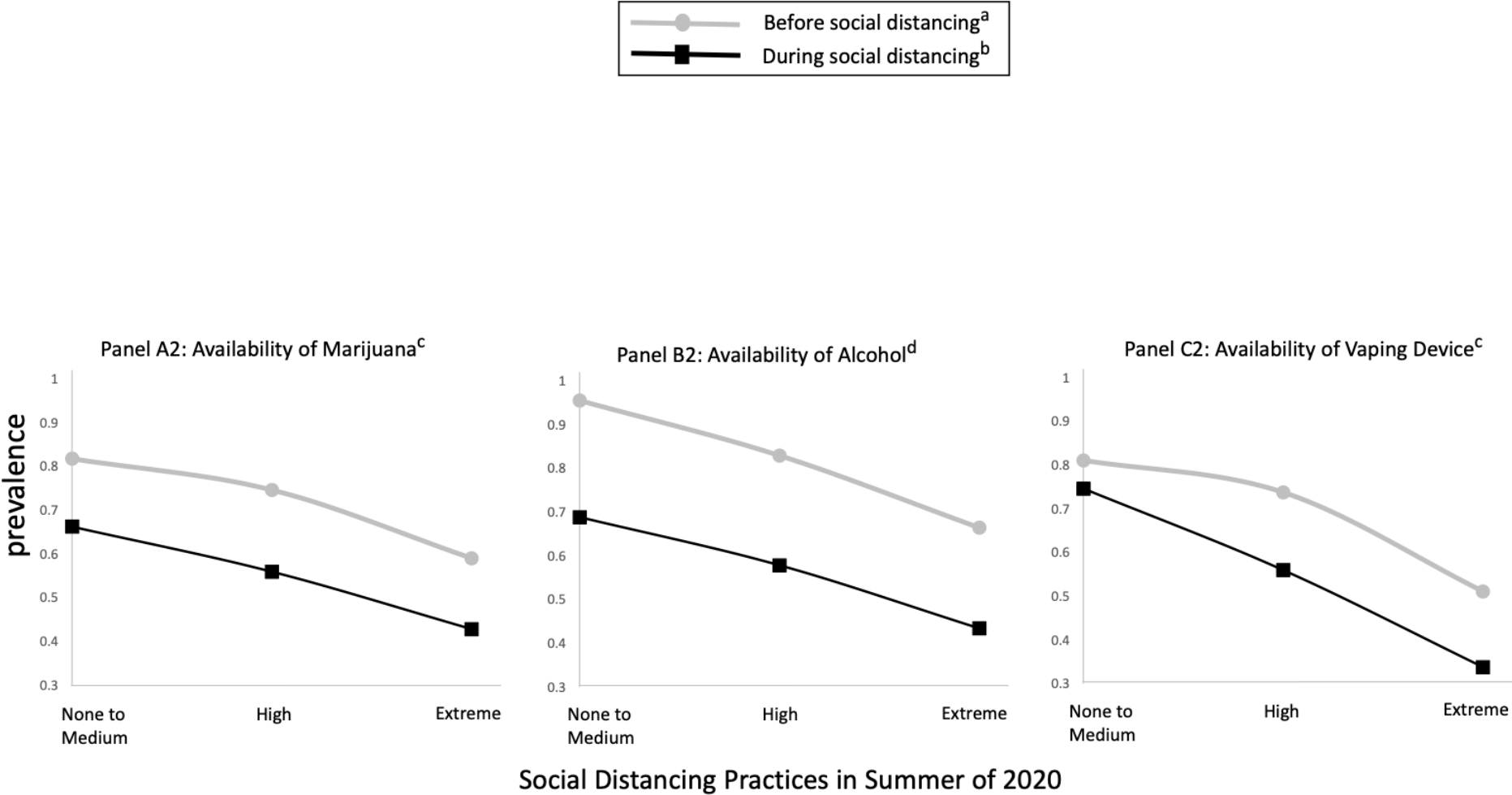
Coded 1 for respondents who answers to either of the questions above for category above included "Never", "Rarely," or "Sometimes."

.61 (.55 - .67)

Prevalence of Substance Use and Substance Availability Before and During the 2020 Pandemic, by Level of Social Distancing in Summer of 2020

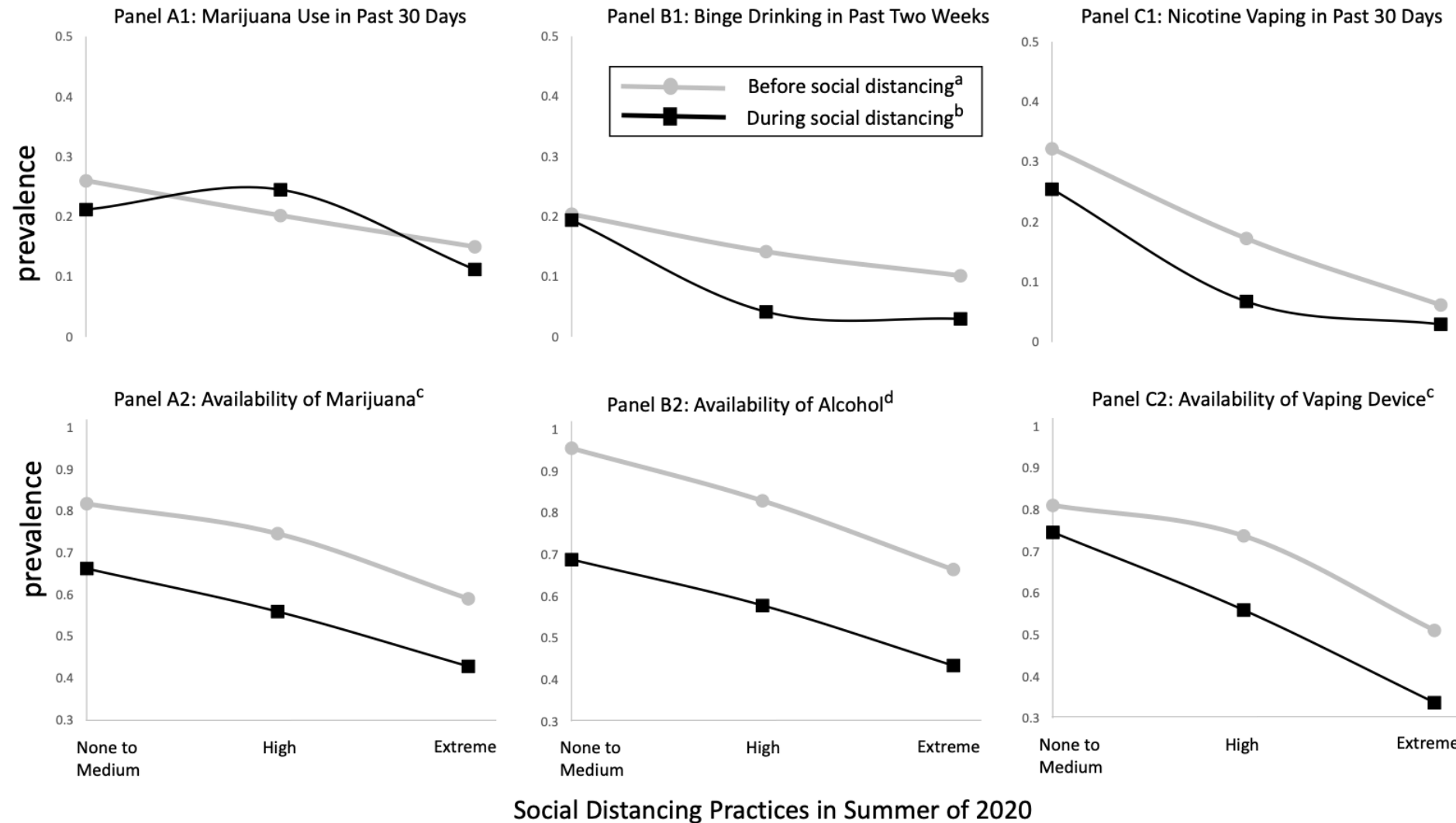


Prevalence of Substance Use and Substance Availability Before and During the 2020 Pandemic, by Level of Social Distancing in Summer of 2020



Miech R, Patrick M, Keyes KM, O'Malley P, Johnston L. Adolescent Drug Use Before and During U.S. National COVID-19 Social Distancing Policies. Drug and Alcohol Dependence, in press.

Prevalence of Substance Use and Substance Availability Before and During the 2020 Pandemic, by Level of Social Distancing in Summer of 2020



Conclusions

- Largest decreases in *substance use availability* ever recorded in the 46 consecutive years it has been monitored by Monitoring the Future
- Support for and against the four hypotheses of this study vary by substance and by social distancing levels.
 - Cannabis and alcohol: “Perseverance” hypothesis (decreased availability, unchanged prevalence)
 - Vaping: “constriction of supply” hypothesis (decreased availability, decreased prevalence)

Conclusions

- Adolescent substance use prevalence decreased surprisingly little in summer 2020, despite social distancing efforts.
- Record decreases in availability of substances did not track with decreases in prevalence. Challenges face a supply-side strategy for adolescent substance use.
- Changes were substance-specific.

Trends in US Alcohol Consumption Frequency During the First Wave of the SARS-CoV-2 Pandemic

Sarah McKetta , Christopher N. Morrison , and Katherine M. Keyes 

Background: The SARS-CoV-2 pandemic created disruptions and stressors which may have influenced alcohol consumption frequency trends. Varying COVID-19 health burden and alcohol policies may have contributed to different consumption trends between states. The aim of this study is to assess trends in alcohol consumption and moderation by state of residence.

Methods: We examined trends in adult drinking days, during the first wave of the pandemic (March 10 to June 8) using longitudinal data from the Understanding America Study ($N = 6,172$ unique participants; $N = 28,059$ observations). Because state mandates were responsive to disease burden, we modeled the interaction of time by COVID-19 burden, defined as whether the state had the median (or higher) daily incidence of COVID-19 cases on the survey date, and state random effects. We controlled for individual sociodemographics, perceived personal/familial COVID-19 burden, mental health symptomology, and risk avoidance.

Results: Drinking days increased throughout the duration (incidence risk ratio [IRR] for drinking per increase in one calendar day = 1.003, 95% CI 1.001, 1.004); trends were heterogeneous by disease burden, with individuals living in states with lower COVID-19 burden increasing (IRR = 1.005, 95% CI 1.003, 1.007) faster than those living in states with higher COVID-19 burden (IRR = 1.000, 95% CI 0.998, 1.002). Trends were heterogeneous between states, but there was no evidence of systematic geographic clustering of state trends.

Conclusions: Drinking days increased during the first months of the COVID-19 pandemic, particularly among residents of states with lower disease burden.

Key Words: Alcohol, SARS-CoV-2, Trends.

Methods

- UnderStanding America Study, waves 1-5 (March 10 – June 8)
 - N=6,172 unique participants; N=28,013 observations
 - Outcome Alcohol frequency of past week (0-7)
 - Covariates: gender, presence of children at home, employment status, age, race, and perceived COVID-19 risk
 - Modeled trends over time using negative binomial regression
 - 3-level growth models: Random slopes for state, random intercept for individual
 - Interaction by COVID-19 burden
-
- COVID-19 burden: whether or not state had >median national cumulative incidence of cases on study date

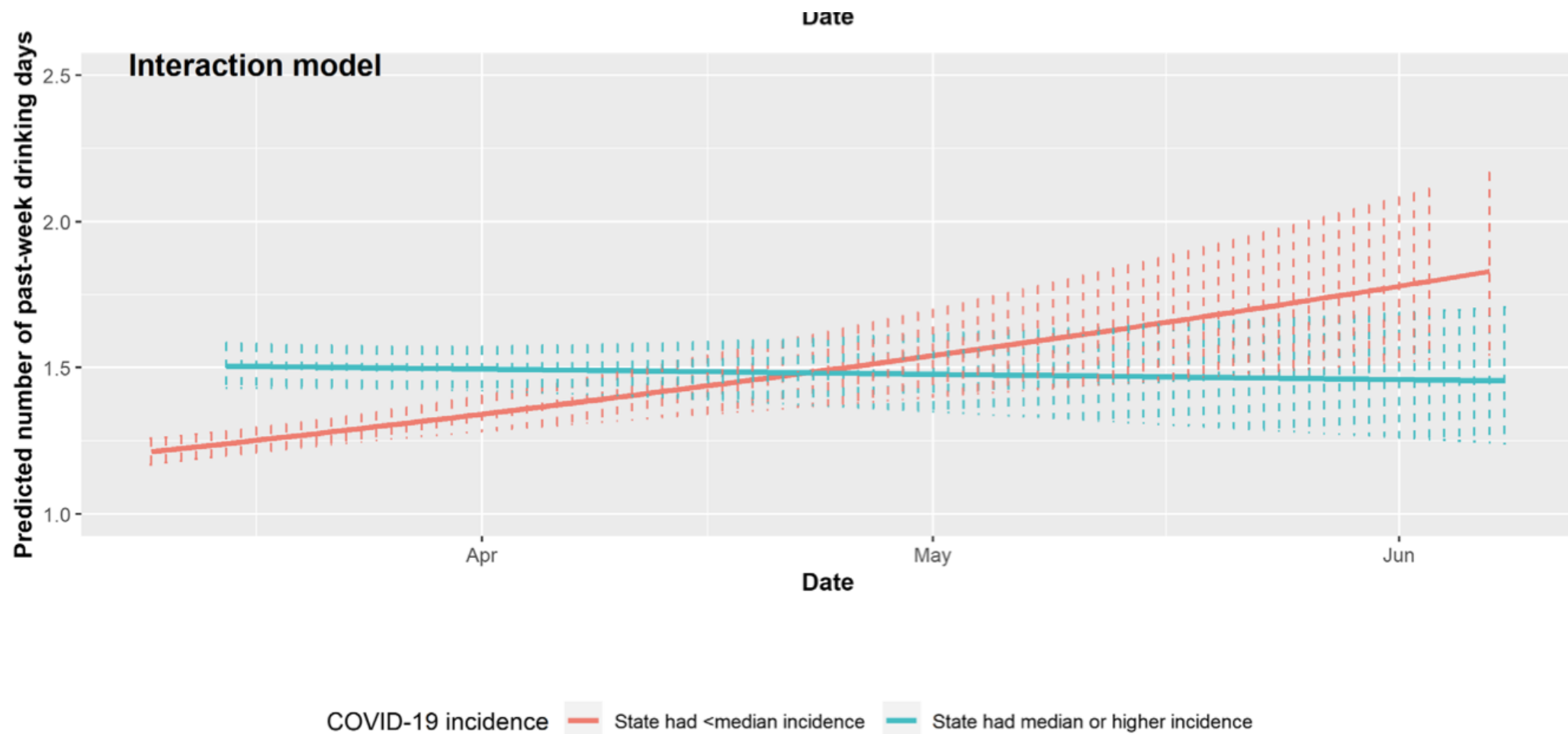


Fig. 1. Predicted count of drinking days over time and state-level COVID-19 presence, March 10, 2020–June 8, 2020; marginal estimates and with interaction by disease burden.

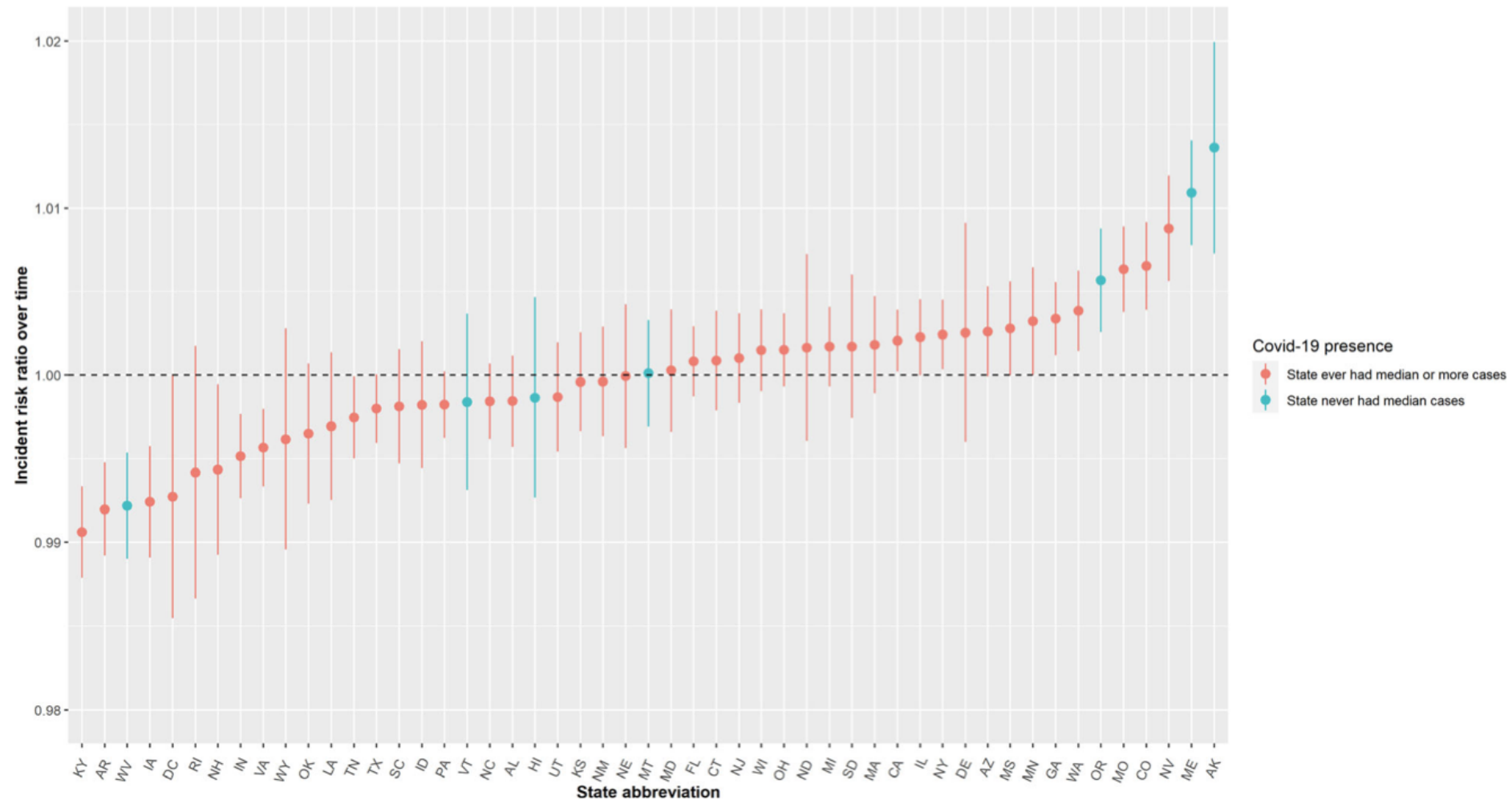
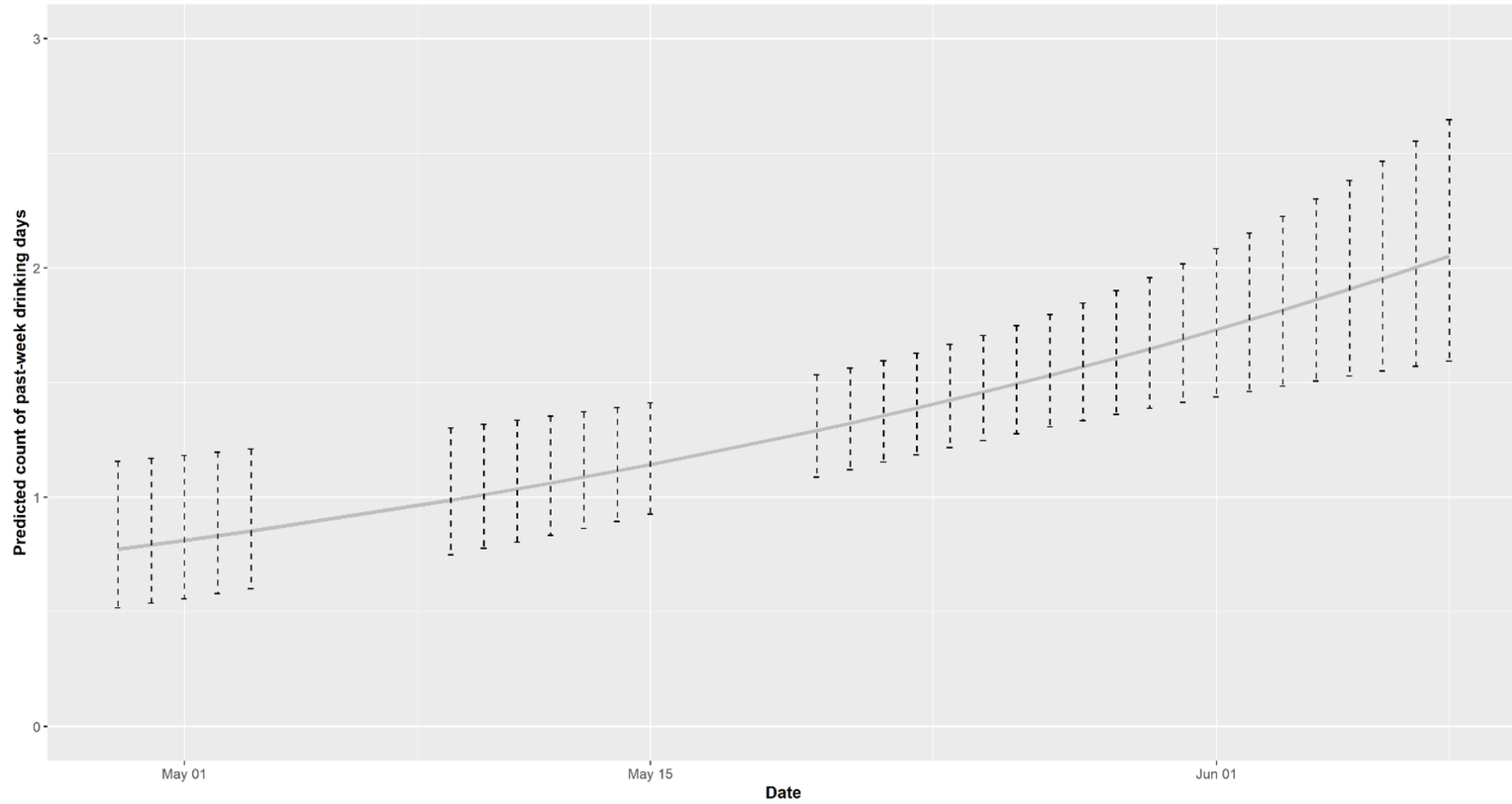


Fig. 2. Incident rate ratio for the count of drinking days as a function of time, from March 10, 2020 to June 8, 2020, by US state, ranked by magnitude of slope.

Conclusions

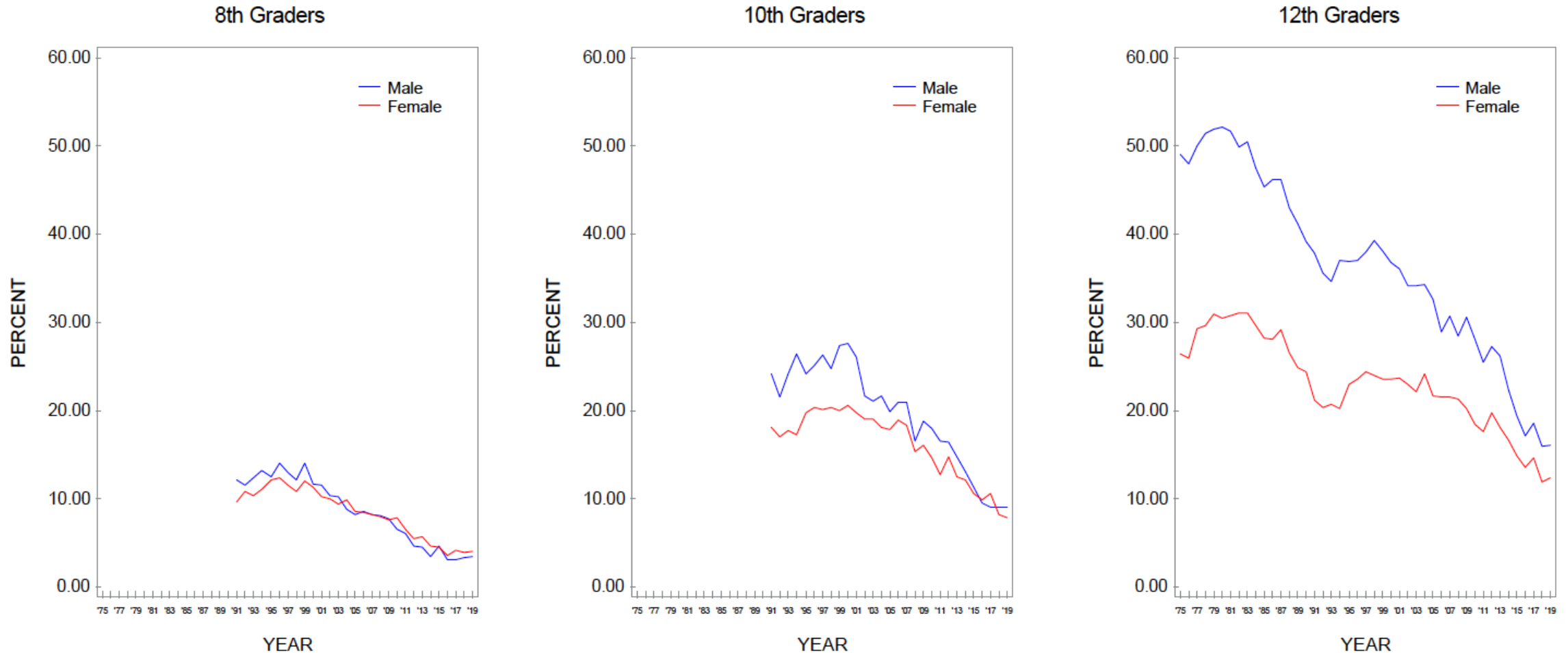
- Alcohol frequency increased overall during the first wave of the pandemic
- However, increases concentrated among individuals living in states with lower COVID-19 burden
- In high COVID-19 burden states, the lack of increase may be related to policy changes, reduced consumption in bars/restaurants

Supplemental Figure 4: Predicted count of drinking days over time among 2019 UAS respondents, April 29, 2019 - June 8, 2019; marginal estimates



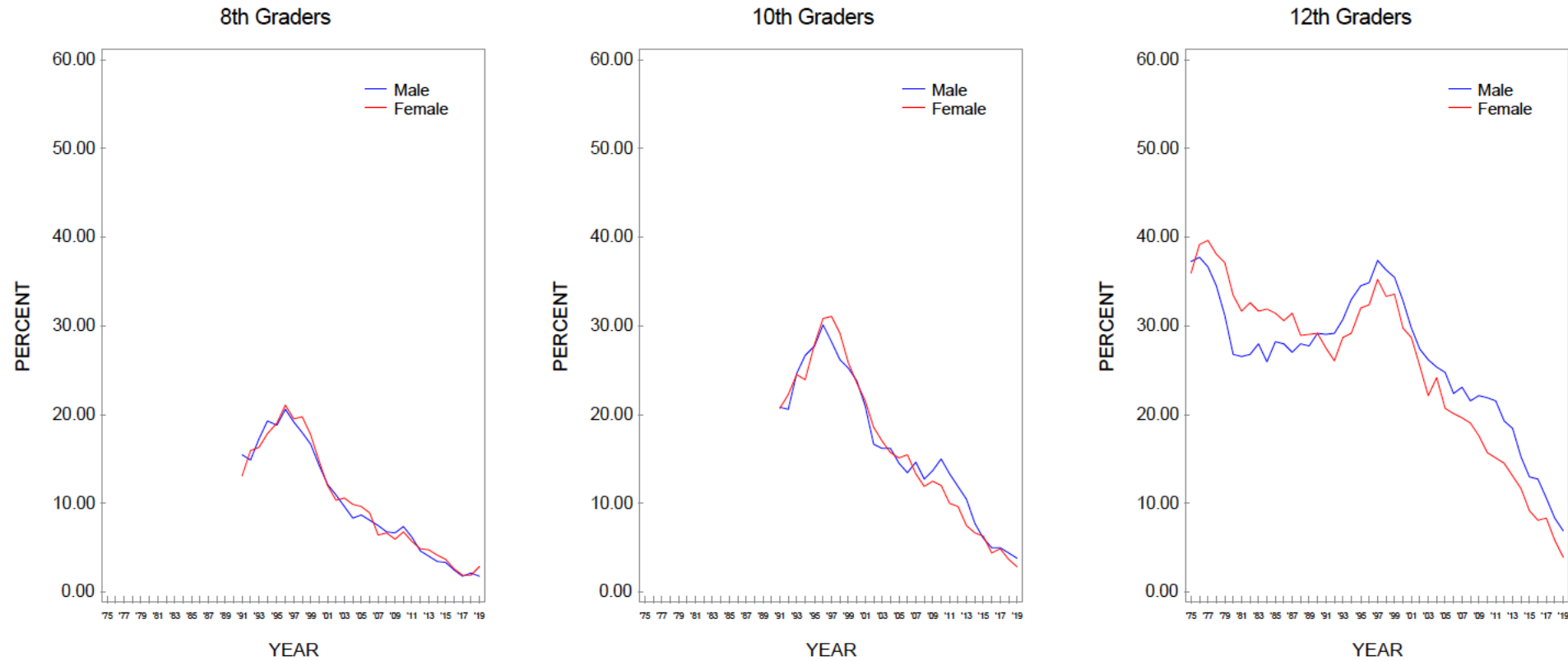
Long-term trends in alcohol, tobacco, and nicotine vaping

Past two-week binge drinking



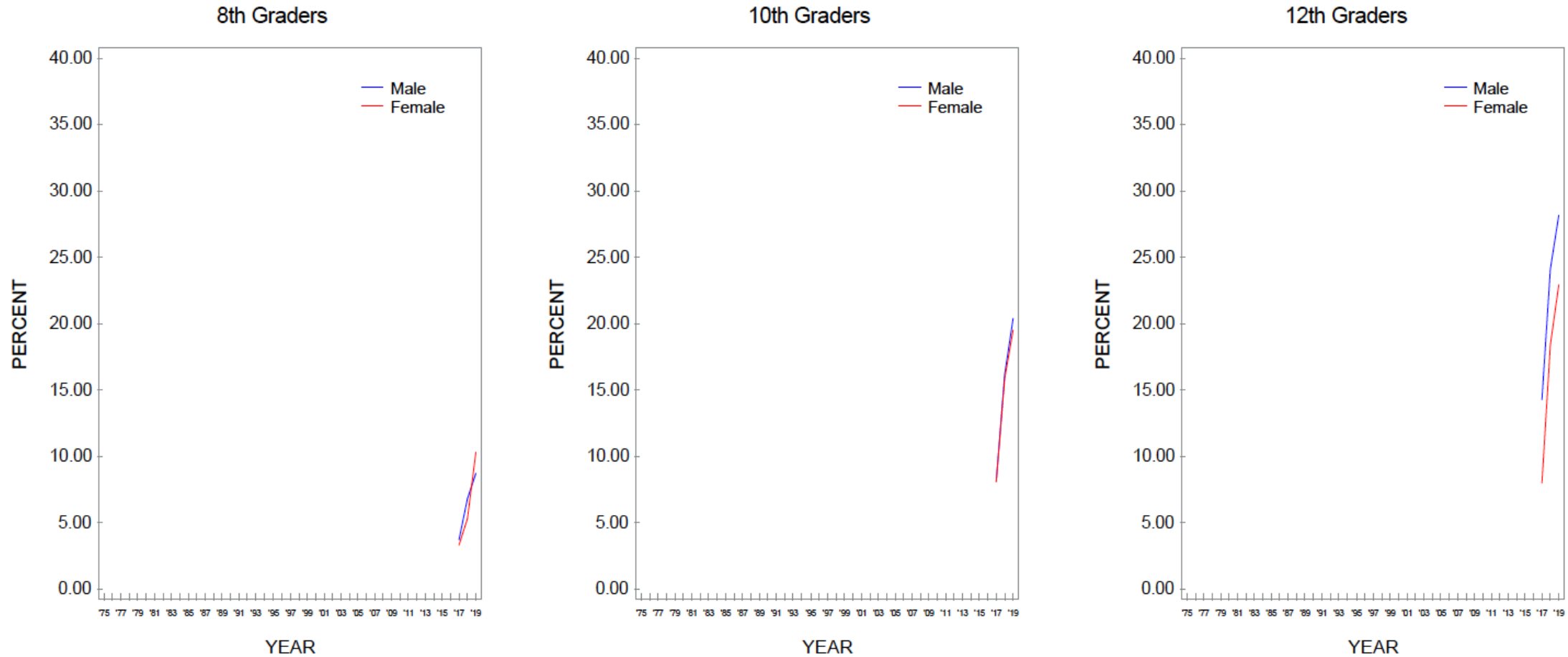
Long-term trends in alcohol, tobacco, and nicotine vaping

Past 30 day cigarette use

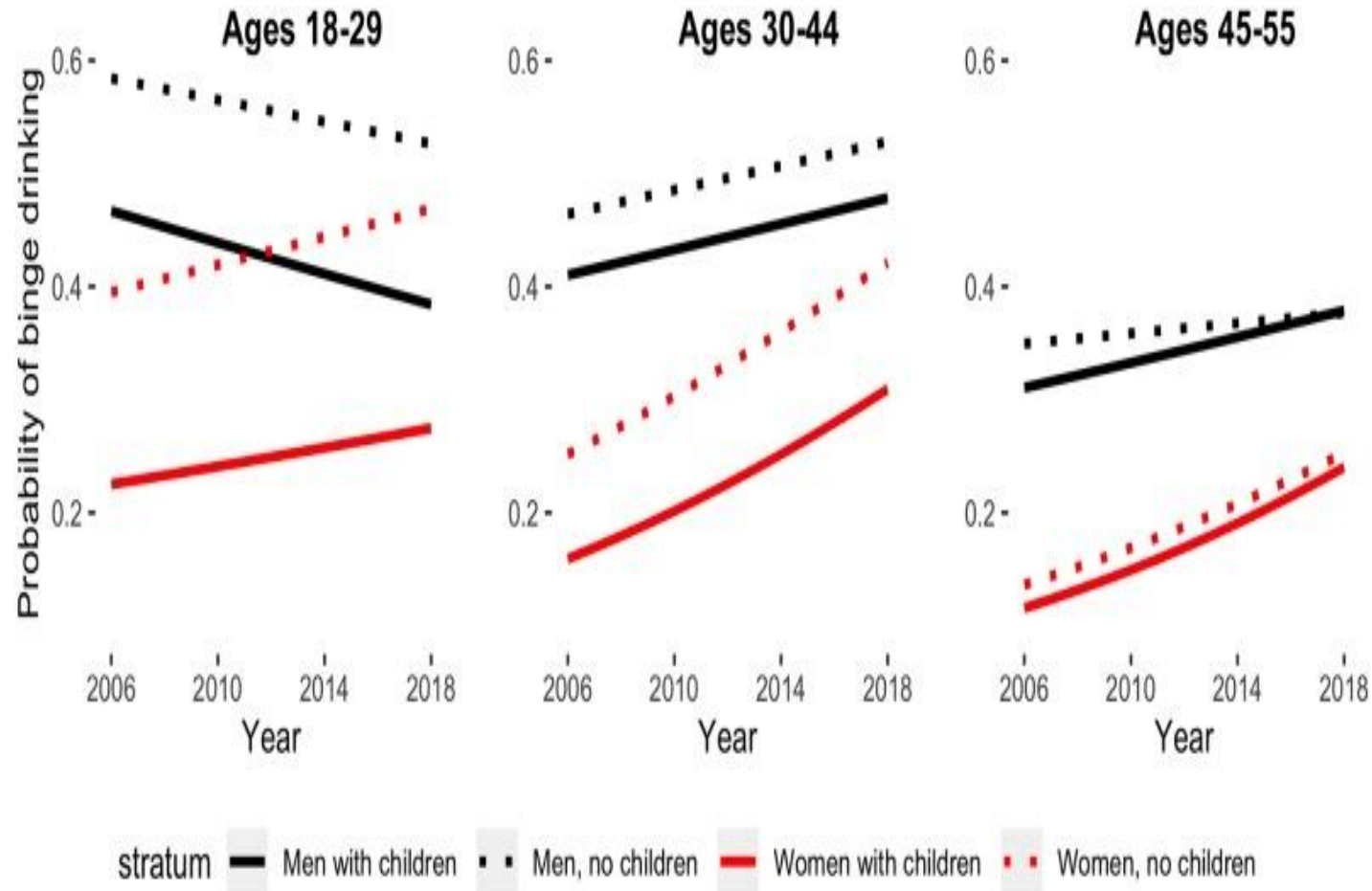


Long-term trends in alcohol, tobacco, and nicotine vaping

Past 30 day nicotine vaping



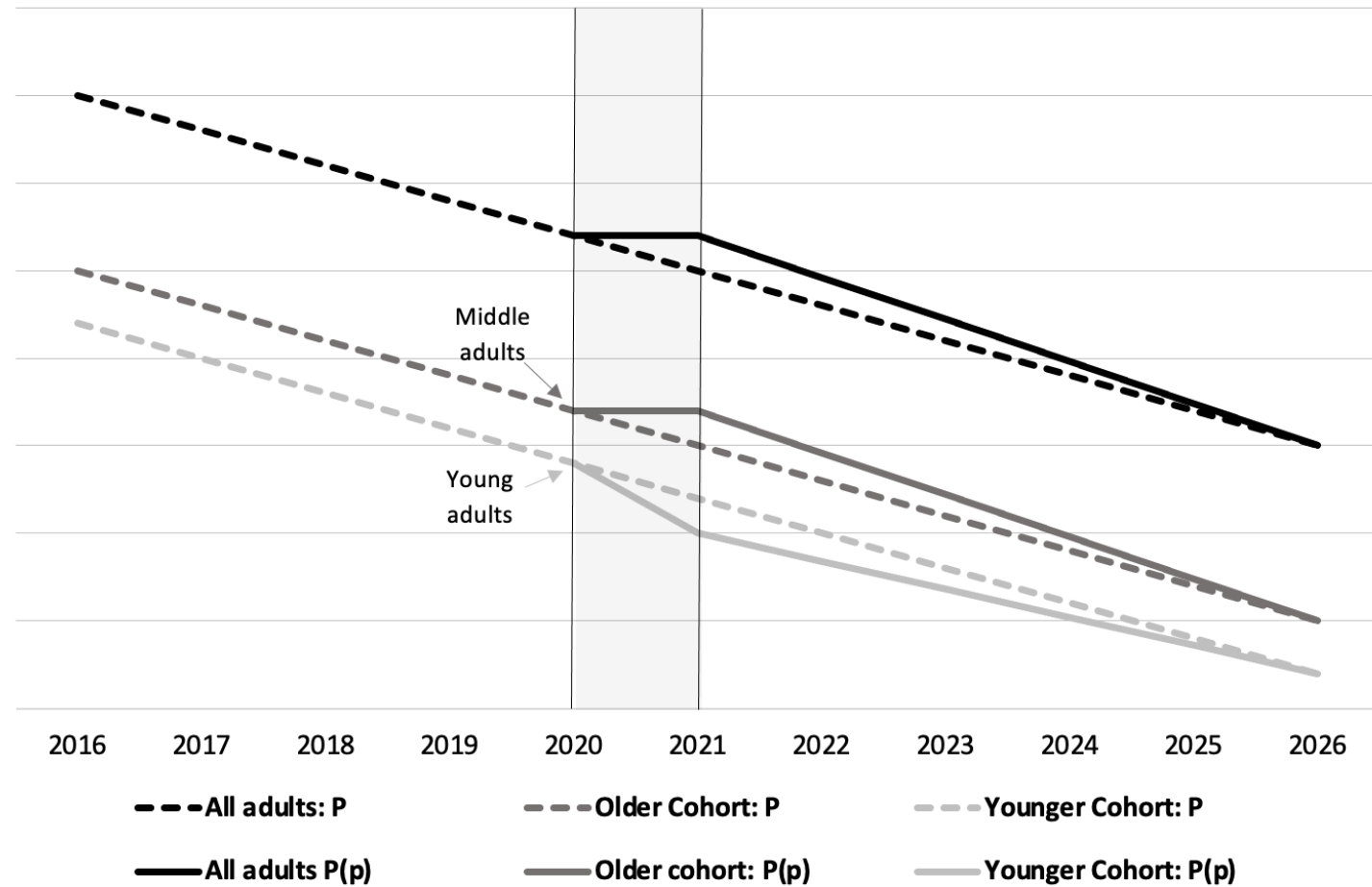
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Hypothetical pandemic impact on substance use



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 - NIDA: R01 parent MTF
 - NIDA: R01 panel MTF
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